GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VII (NEW) EXAMINATION – WINTER 2023

Subject Code:3170725   **Date:16-12-2023**
Subject Name: Digital forensics
Time: 10:30 AM TO 01:00 PM   **Total Marks:70**
Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Simple and non-programmable scientific calculators are allowed.**

Q.1	**(a)**	Explain forensic science.	**03**
	(b)	What is digital forensics explain the process of digital forensics?	**04**
	(c)	Explain Locard's Exchange Principle with suitable scenario.	**07**
Q.2	**(a)**	Explain functional model of IoT	**03**
	(b)	Describe forensic cloning of evidence.	**04**
	(c)	Draw and explain Control Unit of basic computer.	**07**
		OR	
	(c)	Explain order of volatility in brief.	**07**
Q.3	**(a)**	Describe techniques to remove metadata.	**03**
	(b)	Give the advantages of live collection	**04**
	(c)	Explain Main Memory and Auxiliary Memory with example.	**07**
		OR	
Q.3	**(a)**	Explain branches of digital forensics.	**03**
	(b)	Explain Challenges of Digital Forensics.	**04**
	(c)	Write a note on Electronics discovery.	**07**
Q.4	**(a)**	What is data preservation in cyber forensics?	**03**
	(b)	Define and differentiate Live and dead system forensic.	**04**
	(c)	Explain Hashing concepts to maintain the integrity of evidence.	**07**
		OR	
Q.4	**(a)**	Discuss e-mail header forensic in brief	**03**
	(b)	How to restore your deleted or modified folders or files from Shadow Copies.	**04**
	(c)	Discuss techniques of hibernating files	**07**
Q.5	**(a)**	Explain Digital forensic elements.	**03**
	(b)	Write Case study of social networking sites.	**04**
	(c)	Documenting the scene and evidence, maintaining the chain of custody.	**07**
		OR	
Q.5	**(a)**	What is the main purpose of digital forensics?	**03**
	(b)	Explain the role of a cyber forensic investigator.	**04**
	(c)	What is an example of a network forensic technique?	**07**